

§ 32.63-5 Barge hull classifications—B/ALL.

(a) Each barge subject to the provision of this subpart shall be assigned a hull type number. The Commandant will designate the barge hull types to be used for carrying cargoes in order to insure that the vessel is designed consistent with the degree and nature of the hazard of the commodity carried.

(b) For this purpose the barge hull types shall be as follows:

(1) *Type I barge hull.* Barge hulls classed as Type I are those designed to carry products which require the maximum preventive measures to preclude the uncontrolled release of the cargo to the waterways and/or atmosphere.

(2) *Type II barge hull.* Barge hulls classed as Type II are those designed to carry products which require substantial preventive measures to preclude uncontrolled release to the atmosphere, but whose uncontrolled release to the waterways does not constitute a longlasting public or operating personnel hazard, though local and temporary pollution may occur.

(3) *Type III barge hull.* Barge hulls classed as Type III are those designed to carry products of sufficient hazard to require a moderate degree of control.

§ 32.63-8 Alternative arrangements—B/ALL.

(a) Alternative arrangements, differing from those specifically required by this subpart, may be considered and approved by the Commandant, if it is demonstrated to his satisfaction that a degree of safety is obtained which is consistent with the intent of this subpart.

§ 32.63-10 Rakes and coamings—B/ALL.

(a) Each barge hull shall be constructed with a suitable blow form (length, shape, and height of headlog) to protect against diving at the maximum speed at which the barge is designed to be towed. In any integrated tow, only the lead barge need comply with this requirement. In any case, the operator of the towing vessel shall be guided by appropriate speed limitations.

(b) All open hopper type barge hulls shall be provided with coamings around the hopper space and, additionally, a 36-inch minimum height plowshare breakwater on the forward rake. Coamings shall have a minimum height of 36 inches forward graduated to a minimum height of 24 inches at midlength and 18 inches thereafter.

§ 32.63-20 Hull structure—B/ALL.

(a) *General.* In addition to complying with the requirements of § 32.60-1, as applicable, barge hulls of Types I and II shall comply with the provisions of this section.

(b) *Types I and II barge hull.* Under an assumed grounding condition such that the forward rake bulkhead rests upon a pinnacle at the water surface, the maximum hull bending stress shall not exceed the following limits:

(1) Independent tanks may be installed in such a manner that they do not contribute to the strength and stiffness of the barge. In such case, the hull stress shall not exceed either 50 percent of the minimum ultimate tensile strength of the material or 70 percent of the yield strength when specified, whichever is greater.

(2) The Commandant may consider a reduction in hull stress when independent tanks are installed in such a manner as to contribute to the strength and stiffness of the barge and this is accounted for in determining the effective section modulus of the barge. In such case, the hull stress shall not exceed the percentage stress values prescribed in paragraph (b)(1) of this section multiplied by the quantity $(1.5 - \text{SWT}/\text{UTS})$, where SWT is the stress calculated without including the effect of the tanks, and UTS is the minimum ultimate tensile strength of the material. The value SWT, however, shall in no case be more than 75 percent of UTS.

§ 32.63-25 Cargo tanks and supports—B/ALL.

(a) *General.* Saddles and hold-down securing straps for independent cargo tanks shall be designed to prevent tank failure due to loads induced in the saddles or straps by barge deflection.

(b) *Collision protection.* (1) All independent cargo tanks installed on Type